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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/829,269

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EXAMINER

LEE, LAURA MICHELLE

ART UNIT

PAPER NUMBER

3724

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

02/22/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

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<b>Office Action Summary</b>	<b>Application No.</b> 10/829,269	<b>Applicant(s)</b> EVANS, RICHARD B.	
	<b>Examiner</b> Laura M. Lee	<b>Art Unit</b> 3724	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11/27/2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 10-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election of Group I, Claims 1-9 in the reply filed on 11/27/2006 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

2. Claims 10-20 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 11/27/2006.

### ***Claim Objections***

3. Claim 1 is objected to because of the following informalities:

In claim 1, line 8, "complimentary" should be -- complementary--.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1- 7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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6. The term "complementary" in claim 1 is a relative term, which renders the claim indefinite. The term "complementary" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably appraised of the scope of the invention. For example, the definition of complementary could be used to describe the color of the groove and profile tip, or that the two form a right angle to each other.

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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9. Claim 1 is rejected under 35 U.S.C. 102(e) as anticipated by Carlson et al. (U.S. Publication 2004/0079208), herein referred to as Carlson or, in the alternative, under 35 U.S.C. 103(a) as obvious over Manabe et al. (U.S. Patent 5,480,508), herein referred to as Bell. Carlson discloses an anvil (base plate, 26) capable of providing support to a backed ply material cut by an ultrasonic blade (30), the backed ply material traveling in a first direction (along the longitudinal length of the base, 26), the ultrasonic blade having a tip, the ultrasonic blade being operable to travel along a path (122), and the path being oriented in a transverse manner relative to the first direction (page 5, paragraph 42). Carlson discloses the anvil comprising a rigid base (26) for securing the anvil to a cutting assembly, a surface coinciding with the path (the grooved portion of the base plate's back rail, 40), the surface being secured to the base (page 3, paragraph 24), and a groove disposed upon the surface (the grooved portion of the base plate's back rail, 40), the having a curved profile complimentary to the profile of the tip (shown in Figure 1).

However, to the extent that it can be argued that the limitations of the preamble directed to the ultrasonic blade breathe life and breath to the claim and are therefore part of the claim limitations, it is noted that Carlson does not disclose that the ultrasonic blade has a curved profile. However, attention is directed to the Manabe discloses the use of a curved ultrasonic blade to cut a prepreg tape, and that the blade can be an assortment of shapes, corresponding to Figures 10(A)-10(E). Manabe discloses that the different shapes are utilized for different cutting purposes (column 14, lines 14-31). For instance, the cutting blade, 655a, as similarly disclosed by Carlson is useful for

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cutting in one direction. However, the ultrasonic blades with curved profiles, 655b/655c, are used to cut while being reciprocated and to form circular openings. It would have been obvious to one having ordinary skill in the art at the time of the invention to have modified the cutting blade of Carlson to have a curved profile as taught by Manabe so that the cutting apparatus was versatile for a variety of applications as desired by the operator.

Additionally it is noted that as modified, the tip of Carlson would be complementary to the grooves curved profile, as the limitation "complementary" has been interpreted as meaning as "forming or serving as a complement; offsetting mutual lacks" as defined by *The American Heritage® Dictionary of the English Language: Fourth Edition. 2000*. Therefore, Carlson as modified by Manabe discloses groove profile complimentary to the curved profile of the tip in as much the as the applicant's blade tip and groove profile complement each other.

Claims 2-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carlson and in view of Loose (U.S. Patent 3,683,736). Carlson discloses the claimed invention, but is silent as to the material of the base, 26. However, attention is directed to the Loose device that also discloses an anvil (11) utilized for ultrasonic perforation of film and paper material. Loose discloses (column 2, lines) that the anvil is made of a dense rigid material, such as steel or other metal to support photographic paper or film. It would have been obvious to form the anvil of metal as taught by Loose to ensure that the anvil is not damaged by the cutting action as taught by Loose.

In regards to claim 4, since the back rail, like the anvil, is also capable of supporting the backed ply material, for the previously expressed reason of ensuring that the back rail is not damaged by the cutting action, it also would have been obvious to one having ordinary skill in the art at the time of the invention to have made the back rail and consequently the grooved surface of the back rail, out of steel or other metal as taught by the teachings of Loose.

Additionally, it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

10. Claim 5 is rejected under 35 U.S.C. 102(e) as anticipated by Carlson or, in the alternative, under 35 U.S.C. 103(a) as obvious over Weeks et al. (U.S. Patent 6,720,058), herein referred to as Weeks. Although it appears that the groove is an insert situated between clamps 42 and 44 as viewed from Figure 1, Carlson does not positively identify the groove as a separate piece from the back rail. However, attention is directed to the Weeks device that does disclose a groove situated under an ultrasonic tool, a horn, where it is recognized that replaceable inserts can be used for the groove portion directly under the horn so that worn groove areas can be simply replaced without replacing the entire mandrel (base). It would have been obvious to one having ordinary skill in the art at the time of invention to have constructed the grooved section of back plate, 40, of Carlson between clamps 42 and 44, to be an insert (if not already),

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in view of the teachings of Weeks to be a separable and replaceable entity thereby inducing a cost and time savings if the part required replacement.

11. Claim 6 is rejected under 35 U.S.C. 102(e) as anticipated by Carlson or, in the alternative, under 35 U.S.C. 103(a) as obvious over Weeks and in further view of Thrasher (U.S. Patent 3,645,304,). Carlson, as previously modified by Weeks, discloses the claimed invention, except that the insert comprises a high pressure laminate. However, attention is directed to the Thrasher device that discloses an apparatus for operating a rotary saw that utilizes a wear plate formed from MICARTA®, a high pressure laminate. The wear plate is maintained in contact with the side surface of a saw blade under a resilient preload force. Thrasher discloses that it is old and well known in the art to form structures out of MICARTA® for applications requiring a wear resistant material with a slidable surface. Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention to have formed the anvil of Carlson out of MICARTA® for the same purpose of forming the surface out of a wear resistant material that allows slidable movement of the cutting material. As previously discussed, the back plate and thus the insert are also cutting surfaces capable of providing support to the material that is being cut by a cutting edge. Therefore, it also would have been obvious to form the back plate and thus the grooved insert from MICARTA® for the same purpose of forming the surface out of a wear resistant material that allows slidable movement of the cutting material as taught by Thrasher.



Additionally, it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

12. Claims 7-9, are rejected under 35 U.S.C. 103(a) as being unpatentable over Carlson and in view of Weeks, and in further view of Greve et al. (U.S. Patent 5,072,640). Herein Greve et al. shall be referred to as Greve.

Carlson, as previously modified by Weeks, does not disclose that the insert comprises nylon or DELRIN® (ultra high molecular weight polymers). However, attention is directed to the Greve device that discloses a cylindrical shaped anvil located substantially across the length of the conveyor belt module being cut such that it provides support to the modules along a line directly opposite the length of the blade as the blade cuts through the modules. Greve discloses that DELRIN® is a very suitable material for the anvil. DELRIN® yields slightly under pressure to provide some stress relief to the anvil by absorbing the impact energy from the cutter, thereby prolonging the life of the cutting surface. It would have been obvious to form the anvil of Carlson from DELRIN® to provide protection of the cutting surface and prolong its usable life as taught by Greve. As previously discussed, the back plate and thus the insert are also cutting surfaces capable of providing support to the material that is being cut by a cutting edge. Therefore, it also would have been obvious to form the back plate and thus the grooved insert from DELRIN® to provide protection of the cutting surface and prolong its usable life as taught by Greve.

Additionally, it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

13. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Carlson in view of Weeks, Greve and in further view of Sullivan, Jr. et al. (U.S. Patent 4,438,698), herein referred to as Sullivan. Carlson as modified by Weeks and Greve does not disclose that the insert comprises nylon. However, attention is directed to the Sullivan apparatus that discloses that is old and well known to use both nylon and DELRIN in the manufacture of anvils. It would have been obvious to one having ordinary skill in the art to have changed the DELRIN material as taught by Greve for the nylon material as taught by Sullivan, as Sullivan recognizes both materials as being old and well materials for anvil construction. Additionally, it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

### ***Response to Arguments***

14. Applicant's arguments with respect to claim 1 has been considered but is moot in view of the new ground(s) of rejection; refer to the rejection under paragraph 9.

***Conclusion***

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura M. Lee whose telephone number is (571) 272-8339. The examiner can normally be reached on Monday through Friday, 8:00am to 4:30pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Boyer Ashley can be reached on (571) 272-4502. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LML

2/12/2007

  
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SUPERVISORY PATENT EXAMINER